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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,794	07/12/2000	Haldane S. Henry	SC11152ZP	2567
23330	7590	11/05/2003		
MOTOROLA, INC. CORPORATE LAW DEPARTMENT - #56-238 3102 NORTH 56TH STREET PHOENIX, AZ 85018				
			EXAMINER OWENS, DOUGLAS W	
			ART UNIT 2811	PAPER NUMBER

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/614,794

Applicant(s)

HENRY ET AL.

Examiner

Douglas W Owens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-21 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 5-13 is/are allowed.
- 6) ☒ Claim(s) 14 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 15-17 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14 and 18 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,268,262 to Loboda.

Regarding claim 14, Loboda teaches an electronic component (Fig. 10) comprising:

an airbridge with a first layer (12) and a second insulative layer (13);  
wherein a portion of the second layer is over the first layer, wherein;  
a gap (14) exists between a portion of the airbridge and the substrate;  
the airbridge is conductive (Col. 2, lines 41-48 and Col. 4, lines 42-48); and  
the first layer is less resistive than the second layer.

Loboda does not explicitly teach a substrate. It would have been obvious to one of ordinary skill in the art to provide a substrate, since it is a necessary component of a silicon based device.

Loboda does not explicitly teach a first electrically insulative layer overlying the substrate. Loboda teaches that nearly any known semiconductor device may be used with the invention (Col. 2, lines 35 – 40). It would have been obvious to one of ordinary skill in the art to use a well-known device, such as a MOS transistor, since Loboda

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teaches that nearly any known semiconductor device may be used with the invention. A MOS transistor would have required that a first insulative layer be formed on the substrate and commonly include oxide cap layers.

Regarding claim 18, Loboda teaches a semiconductor component, wherein the second electrically insulative layer is absent underneath a center portion of a width of the airbridge.

Regarding claim 19, Loboda does not teach an airbridge wherein the second layer has a compressive stress level of 0 to 200 MegaPascals. The stress level of the second layer would have been dependent upon the thickness. It would have been within ordinary skill in the art to arrive at the optimal thickness through routine experimentation.

Regarding claim 20, Loboda teaches a method of manufacturing an electronic component, comprising (Figs. 1 – 10):

forming a first layer (12) to form a first portion of an airbridge;

forming a first portion of a second layer (13) over the first layer to form a second portion of the airbridge;

wherein:

the airbridge is electrically conductive; and

the first layer is less resistive than the second layer; and

forming a gap (14) between the airbridge and substrate.

Loboda does not explicitly teach forming a substrate. It would have been obvious to one of ordinary skill in the art to provide a substrate, since it is a necessary component of a silicon based device.

Loboda does not explicitly teach forming a first electrically insulative layer overlying the substrate. Loboda teaches that nearly any known semiconductor device may be used with the invention (Col. 2, lines 35 – 40). It would have been obvious to one of ordinary skill in the art to use a well-known device, such as a MOS transistor, since Loboda teaches that nearly any known semiconductor device may be used with the invention. A MOS transistor would have required that a first insulative layer be formed on the substrate.

Regarding claim 21, Loboda teaches a method further wherein:

forming the first layer (12) comprises:

providing the first layer comprised of an electrically conductive material;

forming the second layer comprises:

providing the second layer comprised of an electrically insulative material.

Loboda does not explicitly teach forming a semiconductor device at least partially located within the substrate. Loboda teaches that nearly any known semiconductor device may be used, as discussed above. A well-known device, such as a MOS transistor, would have necessarily been formed at least partially within the substrate.

The electrically insulative layer that forms a portion of the airbridge would have inherently been over the semiconductor device since that is the purpose of the airbridge.

***Allowable Subject Matter***

3. Claims 1 – 3 and 5 – 13 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The response filed on August 18, 2003 is convincing, particularly the final paragraph on page 4.
5. Claims 15 – 17 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed August 18, 2003 have been fully considered but they are not persuasive.
7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a second layer having a thickness that is less than a combined thickness of the gap and first layer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas W Owens whose telephone number is 703-308-6167. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C Lee can be reached on 703-308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DWO  
October 28, 2003



EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800